

**SYSTEM AND METHOD FOR INTERFEROMETER  
NON-LINEARITY COMPENSATION**

**Abstract of the Disclosure**

A system and method for compensating non-linearity of the high-velocity type manifested in heterodyne interferometer position data includes receiving a plurality of groups of digital position values. A plurality of groups of digital phase values from a measurement channel are received. A first group of the digital position values and digital phase values are digitally processed to generate a plurality of block data values. The plurality of block data values are digitally processed to generate at least one quasi-static non-linearity parameter. A second group of the digital position values are compensated based on the at least one quasi-static non-linearity parameter.

10